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EXPERIMENTAL EVALUATION OF PUBLIC POLICY: THE CASE OF STATE LEGISLATION FOR CHILD PASSENGER SAFETY

TOM SEEKINS AND STEPHEN B. FAWCETT
UNIVERSITY OF KANSAS

STANLEY H. COHEN
WEST VIRGINIA UNIVERSITY

JOHN P. ELDER
SAN DIEGO STATE UNIVERSITY

LEONARD A. JASON
DEPAUL UNIVERSITY

JOHN F. SCHNELLE
MIDDLE TENNESSEE STATE UNIVERSITY

RICHARD A. WINETT
VIRGINIA POLYTECHNIC INSTITUTE AND STATE UNIVERSITY

Observations of children in automobiles were made in seven states before and after implementation of legislation requiring use of child passenger safety devices. Increases in safe seating for children covered by state laws and children under 1 year old were observed in three of the five states implementing legislation during this study. Decreases in safe seating for these age groups were observed in two states, however. Increases in safe seating for children from 1 to 5 years old were observed in four of these five states. Although methodological limitations require cautious interpretation, these data suggest the impact child safety seat laws may have on compliance. Implications of this research for policies on child passenger safety and the importance of exploiting naturally occurring public experiments are discussed.

DESCRIPTORS: public policy, health promotion, transportation safety, behavior assessment, applied research

Auto accidents are one of the leading causes of death among young children in the United States (American Academy of Pediatrics, 1982; Insurance Institute for Highway Safety, 1982; Physicians for Automotive Safety, 1978). To combat the many deaths, injuries, and associated costs, medical professionals and safety experts have lobbied for state legislation to protect children who are passengers in automobiles (Decker, Dewey, Hutcheson, & Schaffner, 1984; National Safety Council, 1981). Such legislation has been enacted in all 50 states and the District of Columbia (Fawcett, Seekins, & Jason, 1987; Insurance Institute for Highway Safety, 1985).

Although they vary in specific scope and substance, most of these laws require that children under a certain age (usually 5 years old) riding as passengers in cars be appropriately seated in an approved and properly installed safety device. These safety laws may have increased use of safety seats in Tennessee and Rhode Island (Williams, 1979; Williams & Wells, 1981a, 1981b) and contributed

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Table 1
Child Restraint Laws and Effective Dates in Participating States

State		Law	Date of enactment	Date of implementation
Tennessee	Section 59 930	Under age of 4; $2–$10 fine. Delete "on the lap of older passenger."	4/1/81 (revised)	1/1/78 (original)
Rhode Island	80-H 7310A	Under age of 4; $15 fine; driver's license violation.	4/29/80	7/1/80
West Virginia	H.B. 917	Under age of 5; seat belt sufficient between 3 and 5; misdemeanor; $10–$20 fine; reasonable proof of purchase waiver.	4/10/81	7/10/82
Kansas	H.B. 2202	Under age of 3; front seat only; oral warning.	3/24/81	1/1/82
Massachusetts		Under age of 5; seat belt or device; $25 fine; reasonable proof of purchase waiver.	12/81	1/1/82
Virginia		Under age of 4; seat belts sufficient for 3 and older; loan from state if unable to purchase; $25 fine.		1/1/83
Illinois	H.B. 608	Under age of 5; seat belts sufficient for 4 to 5; $25 fine.	6/82	7/1/83

to a reduction in the incidence of childhood deaths and injuries suffered as a result of automotive accidents (Decker et al., 1984; U.S. Department of Transportation, 1986).

This study represents an example of a naturally occurring social experiment of large scale and long-term duration. A team of researchers from across the country assessed compliance with child passenger safety guidelines in seven states over 3 years. The staggered passage of laws requiring compliance with safety standards in several of these states during the observation period constituted a naturally occurring social experiment in the tradition of experimental social innovation (Campbell, 1969; Fairweather & Tornatzky, 1977) and experimentation with policy options (Kershaw, 1972; Reicken & Boruch, 1974).

METHOD

Subjects and Settings

Subjects were passengers in automobiles who were judged to be between birth and 5 years of age. Children from seven states (Illinois, Kansas, Massachusetts, Rhode Island, Tennessee, Virginia, and West Virginia) participated in the study. Overall, 12,246 observations of children in this age group were collected.

States were selected in May 1981 based on the status of child passenger safety legislation and the availability of colleagues to collaborate in the project. States with existing legislation (i.e., Tennessee and Rhode Island), legislation enacted but not implemented (West Virginia and Kansas), and without legislation (Massachusetts, Virginia, and Illinois) were selected. Table 1 describes the laws concerning child safety and the date of their implementation for each of these seven states.

Observations were collected in two communities in each state (except Tennessee and Massachusetts, where only one setting was used). Communities were selected by local researchers for convenient access and to reflect urban, rural, and suburban environments. In each community, observations were collected in the same locations throughout the entire evaluation. These locations were selected on the basis of representative traffic density and access to observers. In the urban settings, observations were usually collected at several sites, including

Table 2
Observation Sites in Participating States

State	Urban		Rural/Suburban	
	City	Sites	City	Sites
Tennessee	Murfreesboro	Shopping center Fast food chain		
Rhode Island	Providence	Shopping center Lincoln Mall	Central Falls	Broad Street
West Virginia	Morgantown	Day care center Fast food chain		Route 7
Kansas	Lawrence	Day care center Shopping center Busy intersection	Eudora	Main Street
Massachusetts	Attleboro	Washington Plaza		
Virginia	Blacksburg	Grocery store Roadway Shopping mall	Christiansburg	Fast food chain Shopping mall
Illinois	Chicago	Day care centers Busy intersection	Evanston	Busy intersection

busy intersections, shopping centers, child care centers, and fast food restaurants. In the rural or suburban settings, observations were usually collected at one site, such as an intersection on a main street. Table 2 describes the sites at which observations were collected in each state.

Definition and Measurement of Dependent Variables

Two criteria of appropriate seating were used in examining the effects of child passenger safety legislation. First, appropriate seating was assessed in each state according to the terms of that state's law. Second, appropriate seating was assessed according to the criteria established by national safety advocates (e.g., Insurance Institute for Highway Safety, 1982; Physicians for Automotive Safety, 1978). These latter criteria define safe seating for children under 1 year of age as being restrained in a safety seat that supports the child in a supine position facing the rear of the car. Children from 1 to 5 years of age may be safely seated using shields, car seats, or safety harnesses. These guidelines require the proper use of a federally approved safety device. For example, a Cosco-Peterson Saf-T-Shield secures an infant by a three-point restraint that passes over both shoulders and between the legs. The seat is secured in a car by orienting the top of the seat toward the front of the car so the infant lies face up and head forward. A seat belt must be passed through the frame of the seat for maximum protection.

Similarly, inappropriate seating, according to these national guidelines, involves several different conditions, including (a) a child being held in the lap or arms of another passenger, (b) a child seated in an approved safety device without the equipment (i.e., buckles, shields, etc.) engaged or without the seat itself being restrained (e.g., back tether unattached), (c) a child under the age of 5 years restrained with a seat belt or shoulder harness, or (d) a child riding unrestrained in any portion of the car.

The state laws varied from the Physicians for Highway Safety's guidelines and each other in idiosyncratic ways. Each state law called for the use of properly installed, approved child safety devices. The age of children covered, the child's location in the car, and whether seat belts were considered acceptable varied. For example, the Kansas law only required use of approved, properly installed safety devices for children under 2 years of age

when riding in the front seat. The original Tennessee law allowed a mother who is breast-feeding to hold a child in her lap (the most dangerous position). Table 1 outlines the variations in state law.

To accommodate these variations, a checklist was designed for recording observations of child passengers. Four major categories of observations were recorded, including child age, child location, seating type, and appropriateness of seating. Five options were provided for recording child age: birth to one, 1 to 2, 2 to 3, 3 to 4, and 4 to 5 years of age. Three options were provided for recording location: front seat, back seat, or way back (i.e., the back section of station wagons, recreational vehicles, and pickup trucks). Seven options were provided for recording restraint type: no restraint, lap restraint, infant carrier, car seat, shield, harness, or seat belt. This checklist permitted the calculation of compliance with both state laws and national guidelines.

Observational procedures. Observers stationed themselves so that occupied cars could be seen as they approached the site. When an observer noted an occupied car, he or she approached the car so that its passengers were visible. The observer looked into the car and, if a child judged to be between birth and 5 years of age was a passenger, the observer noted on the checklist the age and location of the child and the type of restraint (or nonrestraint) used.

Recording the type of seating required a judgment of whether it was properly used. This included judgments about the orientation of the device, whether the restraining equipment (e.g., shield, harness) was engaged, and whether the device itself was secured in the vehicle. Based on the judgments of age, location, and type of seating, the observer recorded whether the child was appropriately or inappropriately seated. Thus, appropriate seating was a computational conclusion based on direct observation of age, location, and type of seating specified by national guidelines or the particular state laws.

Observations took between 3 and 10 s. During this time, no other vehicles were observed. After observation and scoring of children in a car were complete, the observer waited for the next available car carrying a child.

Observations were conducted once each month during the first year (i.e., June 1981 through May 1982). Thereafter, observations were collected quarterly in some states. The researchers in each state had discretion in selecting the days of observation so as to accommodate weather and work arrangements. An average of 124 observations per experimental period was reported.

Reliability. Interobserver agreement was assessed in two ways. First, secondary observers collected independent observations during each phase of the study. Second, observers in Kansas and Illinois asked a sample of adult passengers of automobiles carrying children to report the ages of child passengers whenever the occasion permitted (e.g., at shopping centers as passengers entered or exited cars). Ages reported by parents were recorded along with the age judgment made previously by the observer. A mean percentage of agreement between observers and parents and between observers was calculated by dividing the number of agreements by the number of agreements plus the number of disagreements and multiplying by 100.

A total of 778 reliability observations, or 7% of the total, was collected across six states in baseline and implementation phases. The mean percentage of interobserver (point-by-point) agreement for all phases of the study averaged 77% for child age (KS = 97%, MA = 93%, IL = 90%, RI = 87%, VA = 84%, WV = 47%), 96% for location in the car (VA = 99%, KS = 98%, IL = 96%, RI = 96%, MA = 96%, WV = 94%), and 94% for seating (MA = 100%, RI = 98%, VA = 97%, IL = 97%, WV = 88%, KS = 86%). The mean percentage of observer-parent agreement for the ages of the children observed in Illinois and Kansas was 94%.

Enforcement measures. Information on the level of enforcement of state laws (i.e., the number of tickets, citations, or warnings issued for violations) was collected by phoning city police offices, county sheriff offices, and state departments of transpor-

tation or police. Data, usually summarized at the state level only, were available for Tennessee, Rhode Island, Kansas, Illinois, and Virginia. Pearson Product Moment correlations were calculated for various aspects of citations issued, state population, duration of the law's existence, and levels of compliance.

Experimental Design

The design of this study can be viewed as forming an interrupted time series design with switching replications (Cook & Campbell, 1979, p. 223). In this design, nonequivalent groups receive treatment at different times and serve as controls for each other, much like a multiple baseline design across subjects.

RESULTS

Figure 1 presents the percentage of child passengers riding in compliance with state laws in the five states that implemented child passenger safety legislation during this study. Table 3 presents the average level of safe seating for children covered by state laws during baseline and after legal implementation for each state implementing a law during this study. Safe seating for children covered by state laws averaged 8% during baseline and 12% after implementation in West Virginia, 33% during baseline and 26% after implementation in Kansas (but see discussion below for examination of the Kansas data), 36% during baseline and 24% after implementation in Massachusetts, 13% during baseline and 57% after implementation in Virginia, and 10% during baseline and 43% after implementation in Illinois. Aggregated across states, the percentage of children riding in compliance with the laws in their state averaged 13% before and 26% after implementation ($\chi^2 = 166.55$, df = 1, $p < .001$).

Table 3 also presents the total number of observations during each period in each state for children under 1 and between 1 and 5 years of age. These two categories are presented separately because national safety standards require that children under 1 year of age be seated differently than older children. Overall, 42% of the children under 1 year old and 9% of the children from 1 to 5 years old were observed to be seated appropriately by these criteria during preintervention periods. Forty-three percent of children under 1 year old and 21% of children between 1 and 5 years old were observed riding safely during postintervention phases.

The Kansas law called for children under 2 years old to be seated safely only if in the front seat (but not other areas) of the car. This might be expected to result in placement of children in areas of the car in which the use of safety devices is not required (Williams & Wells, 1981a) and less frequent use of safety devices in these areas. Observations collected as part of this study and a previous study conducted before the introduction of the Kansas bill to the legislature (Fawcett et al., 1987) permit an examination of this possibility. The percentage of children under 2 years old observed seated in the front seat averaged 74% before the introduction of the legislation, 65% after the passage of the act but before its implementation, and 50% after implementation of the law. The percentage of children under 2 years old riding safely in the front seat averaged 14% before introduction of the legislation, 33% after passage but before implementation, and 26% after implementation of the law. The percentage of children under 2 years old observed riding in safety devices in the back seat averaged 13% before introduction of the legislation, 60% after passage but before implementation, and 70% after implementation of the law.

The total number of citations issued during the course of implementation was 17,454 in Tennessee, 1,907 in Illinois, 525 in Virginia, 222 in Rhode Island, and none in Kansas. Pearson Product Moment correlations were .74 ($p < .08$) between the last observed level of compliance and total citations issued, .77 ($p < .06$) between last level of compliance and average number of citations per capita per month, and .61 ($p < .14$) between last level of observed compliance and average tickets per month. (The last observed level of compliance was used because it was assumed that enforcing a state law has a cumulative effect related to the total enforcement effort preceding an observation point.)

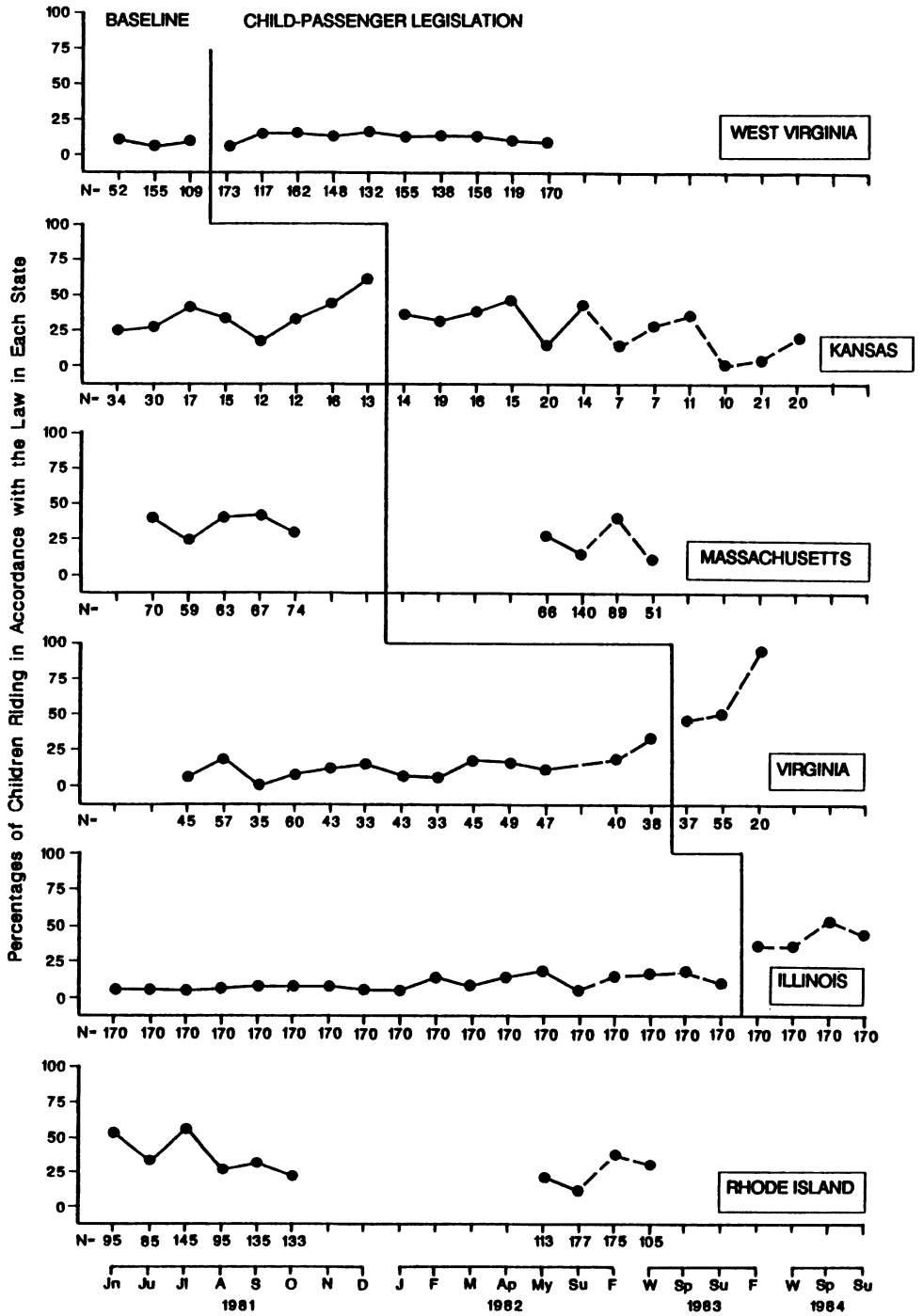

Figure 1. The percentage of children riding in accordance with the laws in five states implementing child passenger safety legislation during this study. The solid vertical line represents the effective dates of announced implementation of state law. Dotted lines between observation points represent periods of quarterly observations. Two observation sets were collected in early and late June 1981 to provide an extended baseline for West Virginia. The actual number for each point is presented below the horizontal axis. The number varies across states, in part, because each state's law covered children of differing ages.

Table 3
Mean Percentage of Children Restrained According to the Terms of State Laws and National Guidelines Before and After Enactment of Child Passenger Safety Legislation

State	State law		National guidelines			
			< 1 year old		1 to 5 years old	
	Before (*n*)	After (*n*)	Before (*n*)	After (*n*)	Before (*n*)	After (*n*)
West Virginia	8 (316)	12 (1,470)	0 (12)	14 (107)	8 (304)	12 (1,363)
Kansas	33 (149)	26 (174)	38 (87)	30 (104)	12 (1,042)	19 (1,149)
Massachsetts	36 (333)	24 (346)	76 (68)	31 (58)	25 (265)	23 (288)
Virginia	13 (568)	57 (112)	48 (46)	93 (29)	6 (1,157)	22 (199)
Illinois	10 (2,980)	43 (680)	34 (211)	70 (23)	8 (2,770)	42 (657)
Rhode Island	—	30 (1,258)	—	54 (193)	—	26 (1,065)
Tennessee	—	—	—	46 (188)	—	17 (861)
Overall percentage	13	26	42	43	9	21
Total *N*	4,346	4,040	424	702	5,538	5,582

DISCUSSION

This study evaluated the effects of child passenger safety legislation on actual use of child safety devices in seven states. Averaged across states, safe seating for children covered by state laws increased from an average of 13% to an average of 26% in states with interventions during this study. Although averaging observations across states may reflect the optimistic goals of safety advocates, it is somewhat misleading, because only Virginia and Illinois showed relatively clear increases and Kansas and Massachusetts showed apparent declines in compliance with state laws.

Safe seating for all children observed under 5 years old increased from an average of 12% to an average of 24%. Average levels of safety seat use for all children under 5 years old increased in four of the five states (West Virginia, Kansas, Virginia, and Illinois) in which interventions occurred during this study. The largest average safety gains were observed for children between 1 and 5 years old; safety levels increased for this population in four of the five states (West Virginia, Virginia, Illinois, and Kansas) but a slight decline was observed in the fifth (Massachusetts). These data are within the ranges observed in other states (Williams, 1979; Williams & Wells, 1981a, 1981b).

Correlations between the number of citations issued and compliance levels suggest that the greater the enforcement effort, the higher the compliance. This is consistent with observations of seat belt laws in Canada (Jonah, Grant, & Lawson, 1984). There are several limitations to this correctional analysis, however. First, the number of states and localities was limited and their selection was not random. Second, data on compliance came from only two communities in each state, whereas enforcement data came from state summaries. Third, the methods of aggregating state implementation data are unknown. Either larger scale correlational studies or controlled case studies, such as those reported by Van Houten and Nau (1981), might better address this important issue.

Several factors may have affected observed vari-

ability within and across states, including the intensity and level of implementation (i.e., citations), the ages of the children covered by a state's law, statistical regression, and the length of time the laws had been in effect. The data described above suggest that the level of implementation may affect compliance with the law. This makes sense both intuitively and technically. Scheduled aversive events for leaving a child unsecured and failure to comply, whether announced, observed, or experienced directly, may function as punishers and negative reinforcers and may lead to increased compliance. For example, Illinois and Virginia reported the highest levels of implementation; increases in compliance over 33% were observed. Conversely, in Kansas, where there was no penalty except an oral warning and law enforcement personnel reported no citations for violations during the observation period, a decline in compliance with state law from 33% during baseline to 26% after implementation was observed.

Similarly, although objective data were not available from West Virginia, where compliance for children covered by state law increased from 8% to 12%, anecdotal reports from law enforcement personnel suggested that the level of implementation was close to that of Kansas. No implementation data were available from Massachusetts. Rhode Island, however, issued 222 citations over a period of approximately 21 months. Thus, the level of implementation in these two states may have also been relatively low.

The ages of children covered by a state's law may affect the observed levels of safety seat use. That is, a state law covering all children under 5 years old would not necessarily be expected to result in the same percentage compliance as a state law covering children under 3 years old. This is because there is simply a larger population targeted, requiring significantly greater numbers of children riding safely to make an equivalent percentage of change. Data also suggest that younger children are more likely to be seated safely. Thus, a state law covering younger children might be expected to have a higher compliance rate than a state law covering a broader age range. For example, the time series effect in West Virginia seems to be relatively small: an average increase of 4%. However, this state's law covers all children under 5 years old; a greater proportion of children than the laws of four of the other states observed (Kansas, Virginia, Rhode Island, and Tennessee). Because the law covers a broader population, a 1% change may account for more children.

Statistical regression may explain some variability within and across states (Cook & Campbell, 1979); that is, high and low average scores of a subgroup are often observed to trend toward the group mean over time. For example, the different course of events in Kansas and West Virginia, two states in which implementation levels appear to be similar, may be explained, in part, in this manner. The level of safe seating for Kansas' children had a relatively higher baseline level than West Virginia's. Subsequent levels in the two states may have related to natural variations over time and not the passage of the state law.

The discrepancy observed in the decrease in compliance for children under 1 year old and the increase for children 1 to 5 years old in Kansas may also be explained by appeal to statistical regression. Alternatively, the relatively high baseline may have been caused by intense publicity about the law during the baseline phase followed by a decline in public attention to the issue after the legislative debates and implementation. The lack of enforcement for the under-two age group may explain the decline in safety seat use for that population. At the same time, the increase in use for those 3 years and older might be explained by continued use of the seats originally used for children 1 and 2 years of age in baseline.

Finally, the length of time a law has been in effect may explain variability, with more variability early followed by a stable level of compliance. Results in Tennessee and Rhode Island, states with the longest standing laws, appear similar to those reported by Williams and Wells (1981a, 1981b). Perhaps levels observed some time after a law's passage are relatively stable indicators of compliance.

It must be noted that accurately observing child seating without entering a vehicle for inspection poses many difficulties. For example, although it

is easy to observe the presence or absence of a safety seat, it is often difficult to determine whether a safety seat is properly secured to the vehicle (e.g., retractable seat belt locking-clip attached). Similarly, observing children in or out of a seat is easy, but determining whether the child is properly secured in the device (e.g., shield closed in locked position) is occasionally more difficult. Thus, assuming some safety seats were not properly used and that such observation constraints were a constant factor across all conditions, these data may represent an overestimate of actual safety seat use as defined by both law and national guidelines.

The Kansas law covering only the front seat presents an opportunity to study compliance in a situation that allows for discriminative responding. Presumably, children who had previously been seated in the front might be seated in the back to avoid purchasing and using safety devices. These data show a 24% increase in the proportion of children riding in the back seat. The percentage of children observed in safety devices in the back seat (i.e., in compliance with the spirit of the law) increased dramatically, however, in comparison to the assessment immediately before the policy debate and in comparison to the level of compliance with the law covering children seated in the front. Indeed, parents may be more likely to place safety seats in the back because the back seat is safer than the front seat, it allows other riders to use the front seat area, and using a safety device in the front seat of a two-door car may increase the difficulty of entering and leaving the car for other passengers. Interestingly, combining safe seating in both the front seat and back seat in Kansas suggests the Kansas effort may have produced an increase in safe seating. The combined average of safe seating in both the front and back seat was 42% during baseline and 47% after implementation.

Passing a state law mandating safety seat use is a large-scale event that sets the occasion for multilevel strategies that may use local community resources to promote change (Elder et al., 1988). This strategy might draw on behavioral research to create educational programs involving community organizations (Fawcett et al., 1982), car seat lending programs (Christophersen, Sosland-Edelman, & LeClaire, 1985), or motivational programs involving local businesses delivering rewards, such as coupons for observed compliance at drive-in restaurants (e.g., Geller, Johnson, & Pelton, 1982).

In our effort to respond quickly to a set of legal and social events over which we had no control, we were confronted with many methodological challenges and limitations due, in part, to the logistics of coordinating a research team dispersed over many states. For large-scale naturally occurring experiments, a standardized measurement instrument must be developed within the time constraints of public debate and decision (perhaps occurring, as in our case, before the parameters of local innovations are known). The system must also be sensitive to a variety of conditions that will prevail in various locales. For the child passenger safety evaluation, the measurement system had to be sufficiently robust to accommodate unpredictable variations in laws (some of which had not yet been enacted), including what ages of children, what types of seating and vehicles, and what locations in the vehicle would be covered. Thus, we can anticipate that such a measurement system might be insensitive to some interesting behavioral features in the varied and changing environments.

Another challenge involves calibrating the measurement system in widely dispersed environments in which natural social experiments occur. We were not able to conduct across-state visits to assess levels of agreement with local primary observers. In West Virginia, for example, where calibration between multiple observers was not arranged, there were known problems with reliability. Without such calibration there is also a possibility of drift by observer pairs in different states despite relatively high levels of interobserver agreement in each locale.

Large-scale experimentation in dispersed sites also requires an efficient, centralized system for managing data collection. As we communicated through memos and telephone calls, we recognized the need for more careful examination of systems for conducting such team research. In addition, the nature and size of the samples used in the widely dispersed environments of naturally occurring experiments may vary in their representativeness and consistency. Without tight control over site selection or travel

resources for local research teams, choices may be dictated more by necessity than by ideal sampling procedures.

A final challenge posed by naturally occurring experiments is that of specifying and measuring the functional elements of the independent variable. Without correspondence between the critical features of state laws and their adoption and implementation, it is difficult to draw conclusions about the effects of one specific innovation. In this study, successive implementation of somewhat consistent child passenger safety laws in several states was evaluated with an interrupted time series design. Clear comparisons are made difficult by variations in public information conveyed during the policy debate, the size and nature of contingencies specified in the laws, the presence or absence of local program interventions, and the implementation of informational campaigns and enforcement procedures following the law. More precise measures of antecedent variables, such as column inches of media coverage, and consequent variables, such as the number of fines paid, would improve our understanding of those features of laws and other social innovations that may have produced whatever effects are observed. Although this area of research would benefit from such information, it may be difficult to obtain in those environments in which researchers have little or no control over the methods of recording information about the independent variable.

There are a number of benefits to conducting naturally occurring experiments such as this one. Information about efforts to achieve a social goal may occasion or reinforce the behaviors of key actors such as legislators, lobbyists, advocates, civil servants, and constituents supporting the enactment and implementation of the particular innovation. Such information may prompt a revision of the policy or the methods for its enforcement.

Social experiments can also extend our knowledge regarding how policies and laws affect contingencies of reinforcement in open environments and the behavior of individuals within them. These experiments may show relationships between laws, behavior, and outcomes and thereby contribute to the integration of knowledge from related fields, such as political science, psychology, and public health (Seekins, Maynard-Moody, & Fawcett, 1987).

Finally, behavior analysts have attempted to extend their impact through strategies of developing large-scale interventions (e.g., Geller, Winett, & Everett, 1982) and disseminating their technologies to relevant audiences (e.g., Fawcett, Seekins, & Braukmann, 1981; Paine, Bellamy, & Wilcox, 1984; Seekins & Fawcett, 1984; Stolz, 1981). State laws and policies established by legislative bodies represent an important mechanism for amplifying the effects of behavior change efforts (see, for example, Carpenter, 1983; Greenberger, 1983; Maccoby, Kahn, & Everett, 1983; Seekins & Fawcett, 1986; Sulzer-Azaroff, 1985; Takanishi, DeLeon, & Pallack, 1983). As suggested by case studies and experimental research (Fawcett et al., 1987; Jason & Rose, 1984) behavioral research data may even contribute to the enactment, implementation, and later revision of such laws.

This study suggests that passage and implementation of child passenger safety laws in five states was followed by increases in use of child safety devices in four of the states. Implementation of these laws in seven states did not result in high or consistent levels of compliance, however. Accordingly, although safe seating increased, the social goal of improving child passenger safety may not yet be fully achieved despite passage of laws in every state. This collaborative investigation suggests a role for behavioral scientists in contributing to assessment and attainment of social goals articulated by public interest groups and enacted in state legislation.

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